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A MONOGRAPH OF THE GENUS *DENDROCINCLA* Gray.

BY HARRY C. OBERHOLSER.

The purpose of the investigation whose results are set forth in the following pages is to clear up to such degree as may be possible the measurable uncertainty of identification attending the birds of the genus *Dendrocincla*. This Dendrocolaptine group is composed entirely of plainly attired species which present often but slight differentiating characters; and many of the original descriptions are both so short and so unsatisfactory that the determination of their positive identity is a matter sometimes of considerable difficulty. Individual color variation is very marked in a few of the forms, occasionally amounting to a greater degree of difference than that which distinguishes some entirely distinct species; and the sexes, though alike in color, frequently differ widely in size. The color of the bill, which some writers have relied on to furnish specific distinctions, seems to change with age, being darkest in immature birds.

The name *Dendromanes*<sup>1</sup> under which Dr. Sclater proposed to separate *Dendrocincla anabatina* and a few of the other small species, at first generically,<sup>1</sup> then subgenerically,<sup>2</sup> seems to have no standing other than as a simple synonym of *Dendrocincla*, since the alleged characters do not prove to be significant; furthermore, there are no other structural differences among the species of the genus, aside from some comparatively slight variations in length of tail, and none of these seem cause sufficient for even subgeneric division.

For the purposes of the present review there have been available examples of all the twenty forms here recognized, save two—the newly described *D. macrorhyncha* and the well-known *D. longicauda*—comprising altogether considerably over 100 specimens. In a difficult group like *Dendrocincla* the examination of types is of great value—in many cases of prime importance—and in this we have been fortunate enough to handle the original specimens of *D. tyrannina*, *D. atrirostris*, *D. o. lafresnayei*, *D. meruloides*, *D. rufo-olivacea*, *D. castanoptera* and

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<sup>1</sup> SCLATER, *Proc. Zool. Soc. Lond.*, 1859, p. 382.

<sup>2</sup> SCLATER and SALVIN, *Ibid.*, 1868, p. 54.

*D. olivacea anguina*, thereby being able to elucidate some problems of doubtful relationship.

The most important papers dealing with the species of this genus appear to be as follows:

LAFRESNAYE, *Revue et Mag. de Zoologie*, 1851, pp. 465-468.

RIDGWAY, *Proc. U. S. Nat. Mus.*, X, 1888, pp. 488-497.

SCLATER, *Cat. Birds in Brit. Mus.*, XV, 1890, pp. 162-168.

Although the present writer's work began with the collection of the United States National Museum, including that of the Biological Survey, he is under great obligations to the authorities of the American Museum of Natural History, and of the Boston Society of Natural History, as well as to Mr. Outram Bangs, for the loan of material, without which, particularly the valuable type specimens, it would have been impossible to arrive at anything like satisfactory conclusions. To Mr. Glover M. Allen he is also indebted for the verification of some obscure references; and especially to Mr. Ridgway, whose constantly courteous assistance has contributed to make this paper much better than it otherwise would have been.

#### Genus **DENDROCINCLA** Gray.

*Dryocopus* Wied, Beitr. Naturg. Bras., III, 1831, p. 1111 (*nec* Boie) (type, *Dendrocolaptes turdinus* Lichtenstein).

*Dendrocincl*a Gray, List Gen. Birds, 1840, p. 18 (type, *Dendrocolaptes turdinus* Lichtenstein).

*Dendroman*es Sclater, Proc. Zool. Soc. London, 1859, p. 382 (type, *Dendrocincl*a *anabatina* Sclater).

*Dendrocichla* Sharpe, Hand-List Gen. and Spec. Birds, III, 1901, p. 74 (nom. emend. pro *Dendrocincl*a) (type, *Dendrocolaptes turdinus* Lichtenstein).

*Chars. gen.*—Similar to *Dendrocolaptes*, but nares linear and somewhat operculate, instead of round and open; bill somewhat more compressed. Species mostly smaller and of plainer colors.

*Type.*—*Dendrocolaptes turdinus* Lichtenstein.

*Geographical Distribution.*—Southern Mexico; Central America; Tobago; Trinidad; and all of South America down to Bolivia and southern Brazil.

#### KEY TO THE SPECIES AND SUBSPECIES OF **DENDROCINCLA**.

A.—Wing over 115 mm.

a.—Wing less than 135 mm.

b.—Exposed surface of wing-quills decidedly tinged with olivaceous . . . . . *ridgwayi*.

b'.—Exposed surface of wing-quills clear chestnut.

- c.—Under parts lighter, more olivaceous; pileum and jugulum more distinctly striated . . . *tyrannina*.
- c'.—Under parts darker, more rufescent; pileum and jugulum less distinctly striated . . . *brunnea*.
- a'.—Wing more than 135 mm. . . . . *macrorhyncha*.
- B.—Wing not over 115 mm.
  - a.—Outer webs of secondaries tawny, in sharp contrast to the dark brown upper wing-coverts.
    - b.—Darker . . . . . *anabatina*.
    - b'.—Paler . . . . . *typhla*.
  - a'.—Outer webs of secondaries chestnut or olive-brown, not in sharp contrast to the wing-coverts.
    - b.—Pileum with distinct pale buffy or ochraceous shaft stripes.
      - c.—Tail about equal to wing . . . . . *longicauda*.
      - c'.—Tail decidedly shorter than wing.
        - d.—A conspicuous ochraceous postocular stripe; exposed surface of wing-quills bright chestnut *atrirostris*.
        - d'.—No conspicuous ochraceous postocular stripe; exposed surface of wing-quills olivaceous.
        - e.—Much more rufescent; throat and sides of head darker; shafts of rectrices brown *turdina*.
        - e'.—Much more olivaceous; throat and sides of head paler; shafts of rectrices mostly black . . . . . *enalincia*.
    - b'.—Pileum without distinct pale buffy or ochraceous shaft stripes.
      - c.—Pileum rufous-chestnut, decidedly contrasted with back.
        - d.—Back and lower parts more olivaceous . *ruficeps*.
        - d'.—Back and lower parts more rufescent.
          - e.—Smaller and paler . . . . . *homochroa*.
          - e'.—Larger and darker . . . . . *acedesta*.
      - c'.—Pileum concolor with back, or more olivaceous.
        - d.—Exposed surface of secondaries decidedly less rufescent than tail.
          - e.—Larger and much more rufescent . *ridgwayi*.
          - e'.—Smaller and much more olivaceous.
            - f.—Darker . . . . . *olivacea*.
            - f'.—Lighter . . . . . *lafresnayei*.
        - d'.—Exposed surface of secondaries not decidedly less rufescent than tail.
          - e.—Feathers of throat with conspicuous pale shaft streaks . . . . . *fuliginosa*.
          - e'.—Feathers of throat without conspicuous pale shaft streaks.
            - Chin rufous or olive-rufous, concolor with breast.

- g.*—More rufescent throughout  
*meruloides.*  
*g'.*—More olivaceous throughout  
*aphanta.*  
 —Chin whitish, pale grayish, or buffy,  
 much paler than breast.  
*g.*—Lower surface darker, chin more  
 whitish . . . . . *merula.*  
*g'.*—Lower surface lighter, chin more  
 buffy . . . . . *phæochroa.*

***Dendrocincla macrorhyncha*** Salvadori and Festa.

*Dendrocops tyranninus* Salvadori and Festa, Boll. Mus. Zool. ed Anat. Comp. Torino, XV, 1899, No. 362, p. 27.

*Type Locality.*—Pun, eastern Ecuador.

*Geographical Distribution.*—Eastern Ecuador.

This recently described species is the largest of the genus, and may readily be distinguished by this character alone. In other respects it appears to be close to *Dendrocincla tyrannina tyrannina*, of which it may prove through further research to be but a subspecies.

***Dendrocincla tyrannina tyrannina*** (Lafresnaye).

*Dendrocops tyranninus* Lafresnaye, Rev. Zool., 1851, p. 328.

*Type Locality.*—Bogota, U. S. Colombia.

*Geographical Distribution.*—United States of Colombia.

This is one of the large forms (wing 118–130 mm.), with the throat conspicuously pale-streaked. It appears to be confined to Colombia, as birds from western Ecuador belong under the next. The two types in the Lafresnaye collection measure as follows:<sup>3</sup>

<i>Sex.</i>	<i>Wing.</i>	<i>Tail.</i>	<i>Exposed Culmen.</i>	<i>Tarsus.</i>	<i>Middle Toe.</i>
?	127	111	28	27.5	17
?	128	117	29	26	18

***Dendrocincla tyrannina brunnea*** (Salvadori and Festa).

*Dendrocincla brunnea* Salvadori and Festa, Boll. Mus. Zool. ed Anat. Comp. Torino, XIII, 1898, No. 330, p. 2.

*Type Locality.*—Nanegal, Ecuador.

*Geographical Distribution.*—Western Ecuador.

Similar to *D. tyrannina tyrannina*, but darker, more rufescent below; the throat deeper ochraceous; the foreneck and pileum less distinctly,

<sup>3</sup> All measurements in this paper are in millimeters.

even to scarcely striated. Specimens examined, including one from the type locality, and compared with the type and other examples of *tyrannina*, show *brunnea* to be an easily recognizable race, which its describers hastened unnecessarily to suppress.<sup>4</sup> There seems to be no doubt, however, of its being only subspecifically distinct.

***Dendrocincla longicauda* Pelzeln.**

*Dendrocincla longicauda* Pelzeln, Orn. Bras., 1868, p. 60.

*Type Locality*.—Borba, Amazonas, Brazil.

*Geographical Distribution*.—Lower Amazon to British Guiana.

Evidently a very good species, though not seen, differing conspicuously from *Dendrocincla tyrannina* in its reduced size, and particularly by reason of its comparatively much longer tail.

***Dendrocincla atirostris* (d'Orbigny and Lafresnaye).**

*Dendrocolaptes atirostris* d'Orbigny and Lafresnaye, Mag. de Zool., 1838, Cl. ii, p. 12.

*Dendrocincla minor* Pelzeln, Orn. Braz., 1868, p. 60 (San Vicente, Matto Grosso, Brazil.)

*Type Locality*.—Guarayos, Bolivia.

*Geographical Distribution*.—Eastern Bolivia and southwestern Brazil.

Apparently a very distinct species, as pointed out by Mr. Ridgway,<sup>5</sup> though for some time confused with *Dendrocincla olivacea lafresnayeii*, but really much more closely allied to *tyrannina* and *longicauda* than to either *lafresnayeii* or *olivacea*. From *D. tyrannina tyrannina* it differs principally in much smaller size; rather paler upper and much paler lower parts; very conspicuous postocular stripe; and the more ashy chin and cheeks. The two types in the Lafresnaye collection (Nos. 2,308 and 2,309) are the only specimens of this species that have been examined. Both are apparently not quite adult, though fully grown; one of them is considerably more olivaceous than the other, but this seems undoubtedly to be only an individual difference. They measure as follows:

<i>Sex.</i>	<i>Wing.</i>	<i>Tail.</i>	<i>Exposed Culmen.</i>	<i>Tarsus.</i>	<i>Middle Toe.</i>
?	97	90	22 <sup>6</sup>	24	14
?	100	85	26	24	15

<sup>4</sup> Cf. SALVADORI and FESTA, Boll. Mus. Zool. ed Anat. Comp. Torino, XV, 1899, No. 362, pp. 26-27.

<sup>5</sup> *Proc. U. S. Nat. Mus.*, X, 1888, p. 493.

<sup>6</sup> Tip of maxilla broken.

The bird described by Pelzeln as *Dendrocincla minor*<sup>7</sup> from San Vicente, Matto Grosso, Brazil, which has hitherto remained unidentified, is undoubtedly the same as that previously called *atrirostris* by Lafresnaye. This is evident from a comparison of the original description of *minor* with the types of *atrirostris*, which shows a perfect agreement both in dimensions and other characters. Furthermore, San Vicente, the type locality of *minor*, is in southwestern Brazil, not far from Guarayos, Bolivia, whence came the first specimens of *atrirostris*. This species appears to have a limited distribution, being known from only eastern Bolivia and Matto Grosso, Brazil, for all citations of *atrirostris* from Ecuador and Colombia belong elsewhere.

***Dendrocincla anabatina anabatina* Sclater.**

*Dendrocincla anabatina* Sclater, Proc. Zool. Soc. Lond., 1859, p. 54, Pl. CL.

*Type Locality*.—Omoa, Honduras.

*Geographical Distribution*.—Southeastern Mexico (Vera Cruz) and Guatemala to Panama.

One of the most conspicuous forms of the genus. In a general way it resembles *Dendrocincla atrirostris*, but may at once be distinguished by its immaculate buffy or ochraceous buff chin, in sharp contrast to the color of the breast; by the color of the outer webs of the secondaries, which is tawny or bright tawny-rufous, unique in the genus and strikingly different from the olive-brown of the wing-coverts or the dark fuscous of the tips of the wing-quills; by a much shorter tail; as well as by other less obvious characters. Birds from Panama are not distinguishable either in size or color from those of Nicaragua or even the States of Tabasco and Vera Cruz, Mexico; but those examined from Guatemala are rather paler, though not sufficiently so to warrant either their separation or their reference to *typhla*.

***Dendrocincla anabatina typhla*, subsp. nov.**

*Chars. subsp.*.—Similar to *Dendrocincla anabatina anabatina*, but decidedly paler throughout, particularly on the lower surface.

*Geographical Distribution*.—States of Yucatan and Campeche, Mexico.

*Description*.—Type, male adult, No. 167,499, U. S. N. M., Biological Survey Collection; Puerto Morelos, Yucatan, Mexico, March 12, 1901; E. W. Nelson and E. A. Goldman.

Upper parts deep reddish raw-umber brown of decidedly olive shade, rather more rufescent on pileum, where the darker edges of the feathers produce an obscurely squamate effect, paler on rump, and passing into

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<sup>7</sup> Orn. Bras., 1868, p. 60.

deep rufous on the upper tail-coverts; tail chestnut; wing-quills chestnut along the shafts, dull rufous exteriorly, shading basally into buff on their inner margins, and broadly tipped with fuscous; superior wing-coverts rufescent olive-brown like the back; sides of head and neck olive-brown mixed with ochraceous, the lores paler, and a noticeable postocular stripe dull ochraceous; chin buff, shading gradually into the raw-umber brown of the remainder of the lower surface; jugulum with broad spots and shaft streaks of dull ochraceous; longest lower tail-coverts rufous; lining of wing ochraceous. Wing, 99, tail, 75, exposed culmen, 21, tarsus, 25, middle toe, 16.5.

A local form of rather restricted distribution, specimens of which have been examined from only Yucatan and Campeche, Mexico, those from the latter locality being, however, indistinguishable from Yucatan examples. The type of *Dendrocincla anabatina anabatina* came from Omoa, Honduras, and although this is not far from the eastern part of Yucatan, yet a specimen seen from La Puerta, Honduras, near the type locality, is decidedly different from *typhla*, and indistinguishable from those taken in Guatemala, while one from Santa Ana, Honduras, is still darker. This, therefore, fixes *anabatina* as the dark form, leaving the Yucatan bird to be supplied with a name, as above.

***Dendrocincla fuliginosa* (Vieillot).**

*Dendrocopus fuliginosus* Vieillot, Nouv. Dict. d'Hist. Nat., XXVI, 1818, p. 117.

*Dendrocolaptes fumigatus* Lichtenstein, Abhandl. Kön. Akad. Wiss. Berlin, 1820, p. 203 (Cayenne, French Guiana).

*Dendrocincla rufo-olivacea* Ridgway, Proc. United States Nat. Mus., X, 1888, pp. 490, 493 (Diamantina, Lower Amazon, Brazil).

*Type Locality*.—Cayenne, French Guiana.

*Geographical Distribution*.—Lower Amazonia, south to Bahia, north to British Guiana.

Similar to *D. atrirostris*, from which, however, it may readily be distinguished by its much more olivaceous coloration both above and below, as well as its lack of pale shaft streaks on the feathers of the pileum. Its olivaceous colors separate it from also *D. anabatina anabatina*, and in other respects it differs from this form much as *D. atrirostris* does. Mr. Ridgway's *Dendrocincla rufo-olivacea*, which unfortunately he was unable to compare with authentic examples of *fuliginosa*, seems to be identical with *D. fuliginosus*, as some time ago considered by Sclater,<sup>a</sup> so that unless more abundant material should prove it a recognizable geographical race occupying the Amazon valley

<sup>a</sup> *Proc. U. S. Nat. Mus.*, X, 1888, pp. 490, 493.

<sup>a</sup> *Cat. Birds Brit. Mus.*, XV, 1890, pp. 165-166.



from the vicinity of Santarem westward, it must be relegated to synonymy. The type and two other specimens from Diamantina, together with one from Pará, Brazil, which represent the material at Mr. Ridgway's disposal when describing *rufo-olivacea*, have all been examined in the present connection, and these alone, although the only specimens now available, indicate a considerable amount of individual variation in *D. fuliginosa*. The type of *rufo-olivacea* and one other from Diamantina are evidently much paler, more grayish below than ordinary *fuliginosa*, and are quite different from the Pará specimen, with which, however, the third Diamantina example very closely agrees.

***Dendrocincla turdina* (Lichtenstein).**

*Dendrocolaptes turdinus* Lichtenstein, Abhandl. Kön. Akad. Wiss. Berlin, 1820, p. 204, Pl. II, fig. 1.

*Type Locality*.—Bahia, Brazil.

*Geographical Distribution*.—Eastern Brazil (Bahia).

Resembling *D. atrirostris*, but apparently larger (wing 100–107 mm.); throat and sides of head more rufescent; exposed surface of wing-quills duller, more olivaceous, not so much contrasted with the color of the back; chin paler; ochraceous postocular stripe lacking. From *D. fuliginosa* it differs in very much more rufescent upper and lower parts; smaller bill; and conspicuously pale-streaked pileum.

In the Lafresnaye collection there are two specimens of this species marked as the types; but this is evidently not quite correct, for they were probably nothing more than the specimens used for description by Lafresnaye in his monograph of the genus *Dendrocolaptes*,<sup>10</sup> as the species was originally named by Lichtenstein,<sup>11</sup> and the real type is, or should be, in the Berlin Museum, where many, if not most, of Lichtenstein's types were deposited. Dr. Sclater records a specimen of *Dendrocincla turdina* from Rio, Brazil,<sup>12</sup> which is possibly to be referred to *D. enalincia*, though without examination this is of course impossible to determine. The decided variation in size among specimens of this form examined by Dr. Sclater<sup>13</sup> is undoubtedly merely sexual.

***Dendrocincla enalincia*, sp. nov.**

*Chars. sp.*—Resembling *Dendrocincla turdina*, but upper and lower parts, including the wings, much more olivaceous; sides of head paler and more grayish, not so sharply defined against the light color of the

<sup>10</sup> *Rev. Zool.*, 1851, p. 465.

<sup>11</sup> *Abhandl. Kön. Akad. Wiss. Berlin*, 1820, p. 204, Pl. II, fig. 1.

<sup>12</sup> *Cat. Birds Brit. Mus.*, XV, 1890, p. 167.

<sup>13</sup> *Loc. cit.*

throat; exposed surface of closed wings, and the broad fuscous tips of the wing-quills darker; upper surface of the shafts of the rectrices mostly deep brownish-black, instead of reddish-brown, the fourth and fifth pair of tail feathers with a large blackish terminal area on the inner webs; mandible (in skin) less yellowish; lining of wing paler.

*Geographical Distribution.*—Southeastern Brazil.

*Description.*—Type, adult, No. 177,707, U. S. N. M., Baurú, Rio Feio, Sao Paulo, Brazil, 1901; E. Garbe.

Upper surface rufescent olive-brown, the rump decidedly paler, the longest superior tail-coverts chestnut, the feathers of pileum with tawny ochraceous shaft streaks which are most conspicuous anteriorly; tail chestnut, the upper surface of the shafts brownish-black, the fifth pair of tail feathers, counting from the outside, having the inner webs broadly tipped with blackish, the same existing though to a less degree on the fourth pair; inner webs of wing-quills basally chestnut, paler on their margins; outer webs of primaries and broad terminal portions on both vanes of primaries and secondaries fuscous, these tips largest on the primaries, more narrow and confined largely to the inner webs on the secondaries, almost absent on the tertials; remaining portions of exterior webs of secondaries reddish olive-brown; upper wing-coverts olive-brown like the back, though rather darker and duller; lores dull grayish-brown, with buffy shaft streaks; cheeks and auriculars of similar color, but somewhat darker and more rufescent, with buffy shaft lines, these most conspicuous on the auriculars; sides of neck like the back, but lighter and somewhat more grayish; chin wood-brown; under tail-coverts light chestnut; remainder of lower parts raw-umber brown, more grayish on the breast, lighter on the throat, the feathers of which have buffy shafts; color of the throat passing gradually into that of the paler chin and the darker sides of the head; lining of wing ochraceous-buff. Wing, 106; tail, 87; exposed culmen, 22; tarsus, 24; middle toe, 17.

In a considerable series of typical *Dendrocincla turdina*, exhibiting the usual amount of individual variation in depth and shade of color to which members of this genus are commonly subject, there is no specimen that can be considered intermediate between *turdina* and *enalincia*. In view of this, as well as of the fact that in *Dendrocincla* perfectly distinct species are often very much alike, *enalincia*, on account of its decided characters, has here been given full specific rank, although it may in time prove to be but the southern subspecific representative of *D. turdina*.

**Dendrocincla merula** (Lichtenstein).

*Dendrocolaptes merula* Lichtenstein, Abhandl. Kön. Akad. Wiss. Berlin, 1820, p. 208.  
*Dendrocincla castanoptera* Ridgway, Proc. United States Nat. Mus., X, 1888, pp. 490, 494 (Diamantina, Lower Amazon, Brazil).

*Type Locality*.—Cayenne, French Guiana.

*Geographical Distribution*.—Valley of the Amazon, to eastern Peru; north to British Guiana and the Orinoco river, Venezuela.

This very distinct species resembles to some extent *D. turdina*, but is darker above; very much darker, more olivaceous below; the throat is more whitish; the pileum without pale shaft streaks; the wings are clear chestnut instead of tinged with olivaceous, being thus more contrasted with the color of the back; and the lining of the wing is darker.

The specimen of this species in the Lafresnaye collection, marked "type" (No. 2,304), is probably only the specimen used by Lafresnaye for descriptive purposes, as Lichtenstein's original example is still in the Berlin Museum. Mr. Ridgway's *Dendrocincla castanoptera*<sup>14</sup> is regrettably a synonym of *D. merula*, for the type and one other specimen now in the U. S. National Museum do not differ in any essential respect from two examples in the collection of the American Museum of Natural History, taken by S. M. Klages at Suapure, Venezuela, nor from the Lafresnaye specimen above mentioned. The two examples of *castanoptera* are considerably smaller than the Lafresnaye specimen of *merula* with which Mr. Ridgway compared them, but this is certainly but a sexual distinction. This sexual difference may easily be appreciated by reference to the following comparative measurements:

Sex.	Locality.	Wing.	Tail.	Exposed Culmen.	Tarsus.	Middle Toe.
♀	Diamantina, Brazil.....	92	73	23	23	16
♂	Suapure, Venezuela.....	98	75	24	24	17
[♂]	..... <sup>15</sup>	101	81	23	25	17

**Dendrocincla olivacea olivacea** Lawrence.

*Dendrocincla olivacea* Lawrence, Ann. N. Y. Lyc. Nat. Hist., VII, 1862, p. 466.

*Type Locality*.—Panama R. R., Atlantic side of Isthmus of Panama.

*Geographical Distribution*.—Panama to southern Honduras.

Similar to *D. fuliginosa*, but darker above and below; the exposed surface of wing-quills much more olivaceous than the tail, instead of being of the same color. From *D. merula* it differs in having the

<sup>14</sup> *Proc. U. S. Nat. Mus.*, X, 1888, pp. 490, 494.  
<sup>15</sup> Lafresnaye Collection, No. 2,304, the reputed "type" of *Dendrocincla merula*.

notæum more olivaceous; wing-quills much washed with olivaceous; upper wing-coverts olive-brown in place of mostly chestnut; sides of head more ashy; throat less whitish; lower surface paler, rather more rufescent, and a slight ochraceous postocular stripe. It is very distinct from *Dendrocincla atrirostris* by reason of its decidedly darker, more olivaceous upper parts; olivaceous tinged wing-quills; more deeply colored, rather more olivaceous ventral surface; almost obsolete ochraceous postocular stripe; and lack of pale shaft streaks on the pileum.

Mr. Ridgway<sup>16</sup> was the first after Lawrence to recognize this species as distinct from *D. atrirostris*, although it is much more closely allied to *D. fuliginosa* and *D. merula* than to *D. atrirostris*. The specimens from Guayaquil, Ecuador, placed under this form by Mr. Ridgway.<sup>16</sup> belong, however, under *D. olivacea lafresnayeii*, since true *olivacea* must be restricted to Central America. Birds from Panama are intermediate between *olivacea* and *lafresnayeii*, but nearer the former.

***Dendrocincla olivacea lafresnayeii*** (Ridgway).

*Dendrocincla lafresnayeii* Ridgway, Proc. United States Nat. Mus., X, 1888, pp. 489, 492 (Upper Amazon?).

*Dendrocincla olivacea lafresnayeii* Allen, Bull. Amer. Mus. Nat. Hist., XIII, 1900, p. 156.

*Dendrocincla olivacea anguina* Bangs, Proc. Biol. Soc. Wash., XII, 1898, p. 138 (Santa Marta, Colombia).

*Type Locality*.—Upper Amazon River.

*Geographical Distribution*.—Ecuador and Colombia.

Like *Dendrocincla olivacea olivacea* in size; but in color lighter, more rufescent above and below, the lining of wing paler. From *D. atrirostris* it may be distinguished principally by lack of pale shaft streaks on the pileum; obsolescent or absent ochraceous postocular stripe; more olivaceous upper surface; and conspicuously more olivaceous wings.

As may thus easily be seen, *lafresnayeii* is far more nearly related to *D. olivacea*, *D. fuliginosa*, and even *D. meruloides* than to *D. atrirostris*, although nearly all writers excepting Mr. Ridgway have, at least in part, confused *lafresnayeii* with *atrirostris*; and all records of *atrirostris* or *olivacea* from Ecuador or Colombia refer undoubtedly to the present form. Examples from Ecuador seem to agree with the type, and those from Colombia are not separable from either. A series of some eleven specimens from the Santa Marta region, Colombia, including the type and original suite of Mr. Bangs' *D. olivacea anguina*,<sup>17</sup> exhibits a

<sup>16</sup> *Proc. U. S. Nat. Mus.*, X, 1888, p. 492.

<sup>17</sup> *Proc. Biol. Soc. Wash.*, XII, 1898, p. 138.

considerable amount of individual variation in the depth and shade of color, both on the upper and lower surfaces, which differences comprise all that appear to distinguish *anguina* from *lafresnaye*; in consequence of which *anguina* must be considered a synonym, as has already been indicated by Dr. Allen.<sup>18</sup>

The specimen in the Lafresnaye collection labelled as one of the types of *D. atrirostris*, and referred by Mr. Ridgway to *D. olivacea*,<sup>19</sup> is undoubtedly an example of *lafresnaye*. Specimens of *olivacea* from Panama, clearly intermediate between *olivacea* and *lafresnaye*, point conclusively to the necessity of using a trinomial for the latter.

***Dendrocincla olivacea phæochroa* (Berlepsch and Hartert).**

*Dendrocincla* (sic) *phæochroa* Berlepsch and Hartert, Novit. Zool., IX, 1902, p. 67.

*Type Locality*.—Munduapo, Orinoco river, Venezuela.

*Geographical Distribution*.—Venezuela.

Very close to *Dendrocincla olivacea lafresnaye*, and in size and general color both above and below not distinguishable; but it has the chin and cheeks less grayish, as well as the chestnut of the wing-quills less washed with olivaceous. It differs more decidedly from true *olivacea*, however, in its lighter, more rufescent coloration, more ochraceous chin, and less olivaceous wing-quills. From *D. merula*, although of the same size, it may be readily distinguished by its paler, rather more olivaceous upper parts; much lighter, more rufescent or ochraceous ventral surface, the throat buffy or ochraceous instead of whitish or grayish; lighter lores; and a slightly evident ochraceous postocular stripe.

Three specimens in the collection of the American Museum of Natural History, collected by S. M. Klages in Venezuela—two from Suapure, one from La Unión, Caura—agree perfectly with Messrs. Berlepsch and Hartert's original description of *phæochroa*. These have been carefully compared with the type of *lafresnaye* as well as with the considerable series of that form at present available, with the result of demonstrating that *phæochroa* is at best but a subspecies of *olivacea*, since the only characters discernible to separate it from *lafresnaye* are shown to be not entirely constant; yet it still is probably quite entitled to stand as a geographical race on its merits as above said.

***Dendrocincla ridgwayi*, sp. nov.**

*Chars. sp.*—Similar to *Dendrocincla olivacea lafresnaye*, but larger;

<sup>18</sup> *Bull. Amer. Mus. Nat. Hist.*, XIII, 1900, p. 156.

<sup>19</sup> *Proc. U. S. Nat. Mus.*, X, 1888, p. 492.

chin, lores, cheeks, and auriculars less ashy; entire upper and lower surfaces, including the wings, much more strongly rufescent.

*Geographical Distribution*.—Costa Rica.

*Description*.—Type, adult male, No. 64,819, U. S. N. M.; Talamanca, Costa Rica, 1873; J. C. Zeledon.

Upper surface deep reddish mummy-brown, rather paler and more grayish on the pileum, lighter and somewhat more rufous on the rump, the longest upper tail-coverts chestnut; tail chestnut; wings chestnut, the exposed surface rather duller and slightly tinged with olivaceous, the tips of outermost primaries broadly fuscous, the inner margins of the quills basally ochraceous, all the superior wing-coverts mummy-brown, somewhat less rufescent than the back; a short, narrow, poorly indicated ochaceous postocular stripe; lores dull brownish-gray; sides of head dull mummy-brown, the auriculars with paler shaft streaks; chin dull grayish-brown, lighter than the remainder of the lower surface which, excepting the chestnut under tail-coverts, is dull, dark, rufescent tawny-olive brown; lining of wing tawny-ochraceous. Wing, 115; tail, 96; exposed culmen, 26;<sup>20</sup> tarsus, 25.5; middle toe, 18.

This new species appears to be undoubtedly most closely allied to *Dendrocincla olivacea lafresnaye*. From *D. olivacea olivacea*, whose territory it inhabits, it differs in much the same respects as from *lafresnaye*, but more strongly. The type and sole specimen has been for some years in the U. S. National Museum collection, and has been successively identified as *D. merula*, *D. olivacea* and *D. atrirostris*! It seems to be undoubtedly a distinct and hitherto undescribed species, for its peculiarities are not such as appear readily or satisfactorily explainable on grounds of individual variation. It bears its present name in honor of Mr. Robert Ridgway, as a slight token of the author's appreciative esteem.

***Dendrocincla meruloides meruloides* (Lafresnaye).**

*Dendrocops meruloides* Lafresnaye, Rev. Zool., 1851, p. 467.

*Dendrocincla merulina* Cabanis and Heine, Mus. Hein., II, 1859, p. 34 (nom. emend. pro *Dendrocops meruloides* Lafresnaye).

*Type Locality*.—"Côte ferme" (= British Guiana).

*Geographical Distribution*.—British Guiana.

Similar to *D. ridgwayi*, but smaller and more brightly colored; cheeks and chin more rufescent; superior wing-coverts and wing-quills less inclined to olivaceous.

The type of this species, which is now in the Museum of the Boston Society of Natural History, along with the rest of the Lafresnaye col-

<sup>20</sup> Tip of maxilla broken.

lection, has been compared with specimens from British Guiana and found to be identical, from which the assumption is apparently safe that it hailed originally from that region, particularly as the birds from Venezuela prove to be different. It is evidently an adult female, and measures as follows: Wing, 95; tail, 73; exposed culmen, 20.5; tarsus, 24.5; middle toe, 14.5. All the specimens of true *meruloides* examined are females, and agree in size with those of the same sex of *D. meruloides aphantia*. The measurements of *meruloides* given by Mr. Ridgway<sup>21</sup> are also based on female examples, and are therefore too small. The name *Dendrocincla merulina* of Cabanis and Heine<sup>22</sup> is a mere puristic emendation of *D. meruloides*, and must therefore be considered identical in application.

***Dendrocincla meruloides aphantia*, subsp. nov.**

*Chars. subsp.*—Like *Dendrocincla meruloides meruloides*, but chin and sides of head usually more grayish; entire upper and lower surfaces, particularly the former, much more olivaceous.

*Geographical Distribution.*—Tobago, Trinidad, and Venezuela.

*Description.*—Type, adult female, No. 74,883, U. S. N. M.; Tobago, West Indies, April, 1878; F. A. Ober.

Upper parts deep rufescent tawny-olive, darker on the pileum, where the feathers have dusky margins, paler and brighter on the rump, the longest upper tail-coverts chestnut; tail chestnut; wings chestnut, the inner margins of the quills basally ochraceous, the secondaries with terminal shaft streaks of dusky, the outer webs of the outermost primaries and broad tips of all fuscous, the superior wing-coverts like the back, save for those of the greater series, which are rather more reddish; lores dull brownish-gray; auriculars the same but darker; remainder of sides of head and neck brown like the back; under tail-coverts chestnut, but lighter than the tail; all the remaining lower surface rufescent tawny-olive, like the upper parts, but lighter, the chin and upper throat decidedly grayish; lining of wing tawny-ochraceous. Wing, 92; tail, 73; exposed culmen, 22.5; tarsus, 23; middle toe, 15.

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<sup>21</sup> *Proc. U. S. Nat. Mus.*, X, 1888, p. 490.

<sup>22</sup> *Mus. Hein.*, II, 1859, p. 34.

The measurements of five adult males are as below :

<i>Locality.</i>	<i>Wing.</i>	<i>Tail.</i>	<i>Exposed Culmen.</i>	<i>Tarsus.</i>	<i>Middle Toe.</i>
Quebrada Secca, Venezuela .....	99	82	22	25	16.5
“ “ “ .....	105.5	87	22.5	24.5	15
Caparo, Trinidad .....	104	84.5	22	24.5	15.5
Princetown, Trinidad.....	105.5	85	24	24.5	16.5
“ “ “ .....	103	78	24	25	16
Average.....	103.4	83.3	22.9	24.7	15.9

This new race differs from *D. olivacea lafresnayei* in its decidedly more rufescent coloration both above and below; less ashy chin and cheeks, the former more uniform with the breast; and less olivaceous upper surface of the wings. It is much more rufescent throughout than *D. olivacea phæochroa*, with the chin not conspicuously different from the rest of the lower parts.

Specimens from Venezuela are apparently like the type; but a considerable series from Trinidad exhibits some individual color variations, while as a whole it is intermediate between *aphanta* and *meruloides*, though decidedly nearer the former.

***Dendrocincla ruficeps* (Sclater and Salvin).**

*Dendrocincla ruficeps* Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 54.

*Type Locality.*—Panama City, Panama.

*Geographical Distribution.*—Panama.

Resembles *D. meruloides meruloides*, but is much darker throughout, particularly on the abdomen; the chin, however, is lighter, and decidedly contrasted with the breast; sides of head more rufescent; the pileum still more so, and conspicuously different from the distinctly olivaceous back.

A very satisfactory series of eleven specimens of *D. ruficeps*, while it evidences considerable individual difference in color, yet appears to establish beyond reasonable doubt the validity of the species; for none of these examples are so reddish on the back, rump, and lower surface as either *homochroa* or *acedesta*. When Mr. Ridgway wrote<sup>23</sup> he had no specimens of real *ruficeps*, and all the birds referred by him to this form, and upon which he predicated its subspecific relationship with *D. homochroa*, prove to belong without doubt to *Dendrocincla homochroa acedesta*. The localities from which specimens have been examined

<sup>23</sup> *Proc. U. S. Nat. Mus.*, X, 1888, p. 491.



by the present writer are Boquete and El Banco, Chiriqui, and the Panama Railroad, Panama.

Five adult males show the following dimensions:

Locality.	Wing.	Tail.	Exposed Culmen.	Tarsus.	Middle Toe.
Boquete, Chiriqui, Panama.....	101	74	24	25.5	16.5
“ “ “ .....	102	76.5	24	26	17.5
“ “ “ .....	100	74.5	23	25.5	17
Panama Railroad, Panama.....	106	78	25.5	27	18
“ “ “ .....	102	83	25	26	18
Average.....	102.2	77.2	24.3	26	17.4

***Dendrocincla homochroa homochroa* (Selater).**

*Dendromanes homochrous* Selater, Proc. Zool. Soc. London, 1859, p. 382.

*Type Locality*.—Teotalcingo, Oaxaca, Mexico.

*Geographical Distribution*.—Southern Mexico (Oaxaca, Campeche, and Yucatan) and Guatemala.

In size like *D. ruficeps*, and otherwise similar, but of a lighter, brighter rufous throughout; the back, rump, and ventral surface less olivaceous; the pileum less trenchantly defined from the back. It resembles also *D. meruloides meruloides*, but in color is much brighter rufous; the pileum is rufous-chestnut, instead of olive-rufous, and is more contrasted with the back; the auriculars are rufous in place of olive-brown; the throat and sides of the head much more rufescent.

This is the brightest rufous of all the species of the genus. Birds from Yucatan and Campeche, Mexico, seem to be rather paler than those from Guatemala, but the difference is barely appreciable.

***Dendrocincla homochroa acedesta*, subsp. nov.**

*Chars. subsp.*—Similar to *Dendrocincla homochroa homochroa*, but larger; decidedly darker and rather more olivaceous throughout.

*Geographical Distribution*.—Panama, Costa Rica and Nicaragua.

*Description*.—Type, adult male, No. 62,043, U. S. N. M.; Chiriqui, Panama; Enrique Arcé.

Upper surface burnt-umber brown with a slight olive shade, the pileum more rufescent, the rump also more reddish, and paler, the longest upper tail-coverts chestnut; tail and wings, including the upper wing-coverts, chestnut, the primaries tipped with fuscous; sides of neck and head dull reddish-brown, the lores dull light brownish-gray; chin dull tawny; under tail-coverts chestnut; rest of ventral surface dull

reddish-brown like the back, but somewhat paler; lining of wing light chestnut.

Five adult males exhibit the following measurements:

<i>Locality.</i>	<i>Wing.</i>	<i>Tail.</i>	<i>Exposed Culmen.</i>	<i>Tarsus.</i>	<i>Middle Toe.</i>
..... <sup>24</sup>	105	77	23	27	17
Chiriqui, Veragua, Panama.....	105	78	23	26.5	17
“ “ “ “ <sup>25</sup> .....	107	84	24	26	17
Navarro, Costa Rica.....	107	82.5	26	26.5	16
Sacuyá, Nicaragua.....	106	81.5	25	25.5	17
Average.....	106	80.6	24.2	26.3	16.8

This form of *Dendrocincla*, though occupying in part the same region as *D. ruficeps*, is apparently distinct, differing in its larger size; much more reddish rump, back, and lower parts; and more uniform upper surface, the pileum being in color less definitely distinct from the interscapular region.

<sup>24</sup> Lafresnaye Collection, No. 2,310.

<sup>25</sup> Type.